What is claimed is:

1. A method of re-routing a path in a terrestrial Multiplex Section Shared Protection Ring network in the event of a failure in a span of said path, said ring network comprising network elements connected in a ring configuration through fiber spans, said fiber spans comprising high-priority channels and low-priority channels, said method comprising the step of performing a ring switch action by the MS shared protection mechanism, wherein it further comprises the steps of:

providing said path with a Time Slot Interchange mechanism, thus obtaining a Time Slot Interchange path wherein different high priority time slots are occupied in different path spans;

providing each time slot with an index; and

re-routing the Time-Slot Interchange path over time slot of the low-priority channels corresponding to the time slot of the high-priority channels of the failured span.

2. A method according to claim 1, in which a further span is affected by a failure, wherein the method further comprises the steps of:

selecting one of the two failured spans; and

re-routing the Time-Slot Interchange path over the time slot of the low-priority channels corresponding to the time slot of the high-priority channels of the selected failured span.

3. A method according to claim 1, wherein said ring network is a two-fiber network, wherein the step of re-routing the Time-Slot Interchange path comprises the step of re-routing the path over the low-priority channels with the index given by the sum of half overall number of handled channels and the index of the time slot of the high-priority channels allocated on the failured span.

4. A method according to claim 2, wherein said ring network is a two-fiber network, wherein the step of re-routing the Time-Slot Interchange path comprises the step of re-routing the path over the low-priority channels with the index given by the sum of half overall number of handled channels and the index of the time slot of the high-priority channels allocated on the selected failured span.

5. A method according to claim 1, wherein said ring network is a four-fiber network, wherein the step of re-routing the Time-Slot Interchange path comprises the step of re-routing the path over the time slot of low priority channels with index corresponding to the index of the time slot of the high-priority channels allocated on the failured span.

6. A method according to claim 2, wherein said ring network is a four-fiber network, wherein the step of re-routing the Time-Slot Interchange path comprises the step of re-routing the path over the time slot of low priority channels with index corresponding to the index of the time slot of the high-priority channels allocated on the selected failured span.

7. A method according to claim 2, wherein the step of selecting one of the two failured spans comprises the steps of:

identifying switching nodes in failured path, each node being associated with an identification number; and

selecting the failured span adjacent to the switching node with higher/lower identification number.

8. A method according to claim 2, wherein the step of selecting one of the two failured spans comprises the steps of:

identifying switching nodes in failured path, each node being associated with an identification number;

providing a ring map with node order; and

selecting the failured span adjacent to the switching node that comes first/last in the ring network map.

9. A method according to claim 2, wherein the step of selecting one of the two failured spans comprises the step of:

identifying switching nodes in failured path, each node being associated with an identification number;

identifying East and West sides in the network; and

selecting the failured span adjacent to the switching node far East or far West in the ring network.

10. A method according to claim 2 wherein at least one node has become isolated by the failures and wherein the method comprises the additional steps of:

identifying termination nodes of failured path;

subdividing the ring network into a first and second sub-networks, a second sub-network comprising the at least one isolated node, the first sub-network comprising the other nodes of the ring network;

evaluating if both the corresponding termination nodes belong to the first or second sub-networks; and

taking actions for re-routing the failured path in case the evaluation about termination nodes is positive.

11. A method according to claim 1, wherein it comprises the additional step of providing all the network elements involved in the Time-Slot Interchange path allocation with information concerning whole path allocation in the ring, namely in which node the Time-Slot Interchange path is dropped, inserted or is made to transit, on which time slot the

path in question is allocated and concerning possible concatenations present, distinguishing between East side and West side.

12. A network element of a terrestrial Multiplex Section Shared Protection Ring network, said ring network comprising further network elements connected in a ring configuration through fiber spans, said fiber spans comprising high-priority channels and low-priority channels, said network element comprising

means for performing ring switch actions, namely pass-through, bridge or switch actions, upon receipt of corresponding signalings; and

means for generating and sending proper signalings upon receipt of corresponding signalings,

a path being installed in said ring network, wherein said installed path is a path in time slot interchange where different high priority time slots are occupied in different path spans and wherein said network element further comprises means for, in the event of a failure on a span of the installed path, re-routing the path over the time slot of the low-priority channels corresponding to the time slot of the high-priority channels of the failured span.

13. A network element according to claim 12, wherein a further span becomes affected by a failure, wherein it further comprises:

means for selecting one of the two failured spans; and

means for re-routing the failured path on time-slot of low priority channels corresponding to time slot of high priority channels of the selected failured span.

14. A network element according to claim 12, which is part of a two-fiber network, wherein the re-routing means comprise means for re-routing the path over the time slot of the low-priority channels with index given by the sum of half the overall number of

the handled channels and the index of time slot of the high-priority channels allocated on the failured span.

15. A network element according to claim 13, which is part of a two-fiber network, wherein the re-routing means comprise means for re-routing the path over the time slot of the low-priority channels with index given by the sum of half the overall number of the handled channels and the index of time slot of the high-priority channels allocated on the selected failured span.

16. A network element according to claim 12, in which said ring network is a four-fiber network, further wherein the means for re-routing the path comprise means for re-routing the path over the time slot of the low-priority channels with index corresponding to the index of time slot of the high-priority channels allocated on the failured span.

17. A network element according to claim 13, in which said ring network is a four-fiber network, further wherein the means for re-routing the path comprise means for re-routing the path over the time slot of the low-priority channels with index corresponding to the index of time slot of the high-priority channels allocated on the selected failured span.